

REMARKS

Careful consideration has been given by the applicant to the Examiner's comments and rejection of the claims, as set forth in the outstanding Office Action, and favorable reconsideration and allowance of the application, as amended, is earnestly solicited.

With respect to the minor objections to the disclosure, as set forth in Paragraph 1 of the Office Action, appropriate amendatory action has been taken to correct the grammar in conformance with the Examiner's requirements.

Applicant further notes the Examiner's rejection of Claims 1-9 under 35 U.S.C. §112, second paragraph, for being indefinite, as detailed in Paragraphs 2-7 of the Office Action.

Accordingly, concerning the appropriate terminology in Claims 1-4, this has been amended to indicate, rather than the objectionable term "optionally plus an integral multiple" to indicate that this pertains to the selective addition of an integral multiple of the wavelength (λ) of the pressure wave. Consequently, the terminology in these claims is now deemed to be clear in defining that particular selective or optional addition.

Concerning Claim 1, the latter has been amended in extensive aspects so as to provide for the clarity in terminology, as requested in Paragraph 4 of the Office Action. Accordingly, the amended Claim 1 should now be in full compliance with all of the formal matters raised by the Examiner in the Office Action.

With respect to the terminology in Claims 2 and 4, as mentioned hereinabove, this has also been amended to meet the Examiner's requirements, concerning which applicants note as follows:

Claim 2 sets forth (as well as Claim 3) that the piston machine is a hydraulic pump and that the length (L) between the outlet-side kidney-shaped control port (9) and the second end (34) of the

pressure compensation line is approximately $\frac{1}{4}\lambda$, or approximately $\frac{1}{4}\lambda$ and selectively, an additional integer multiple of the wavelength (λ) of the pressure wave, wherein λ signifies the wavelength of the pressure wave.

Claim 4 similarly indicates (as well as Claim 5) that “the length (L) (...) is a fraction of the wavelength (λ)” or a fraction of the wavelength (λ) “plus selectively, the addition of an integer multiple of the wavelength”, whereby the fraction corresponds to

Concerning the dependencies of Claims 6-9, these have been amended to be in conformance with the U.S. practice.

Applicant further notes the rejection of Claim 1 under 35 U.S.C. §102(b) as being anticipated by Perstnev, et al., U.S. Patent No. 6,024,541 A, as detailed extensively in the Office Action.

Alternatively, Claim 1 has also been rejected as being unpatentable over Perstnev, et al. under 35 U.S.C. §103(a) and further in view of Burdisso, et al., U.S. Patent No. 6,112,514 A.

In addition, Claims 2-5 have been rejected as being unpatentable over Perstnev, et al. in view of Burdisso, et al. and further in view of Meier, U.S. Patent No. 4,362,223 A and Tomell, et al., U.S. Publication No. 2002/0098093 A1; whereas Claim 6 has been rejected over the art applied to the preceding Claim 5 and further in view of Baars, et al., U.S. Patent No. 5,762,479 A.

Claim 7 has been rejected over the art applied to Claims 1-5, further in view of Nishikawa, et al., while Claims 8 and 9 have been rejected as being unpatentable over the art applied to Claims 1-7, further in view of Bratt, et al., German Patent Document DE4229544A1.

Concerning the foregoing, applicant notes that the only publication of significance, and wherein the present claims are deemed to clearly and patentably distinguish thereover, is Perstnev, et al. and possibly Burdisso, et al.

However, the claims, as amended herein, are clearly and patentably distinguished over the art, irrespective as to whether the latter is considered singly or in combination.

Concerning Perstnev, et al., this provides for an axial pump that incorporates a rotatably mounted cylinder block 26, in which cylinder C_1 and C_2 include pistons P_1 and P_2 .

Referring to Fig. 2 of Perstnev, et al., there is provided a suction port S and a discharge port D including solid bridge-over portions SD and DS, referring to Column 2, Lines 8-21 of Perstnev, et al.

The bridge-over portion SD incorporates a first passage 42, wherein a first end of this first passage 42 terminates in the bridge-over portion SD, Column 2, Lines 25-34. However, a second end of the first passage 42 terminates in a cushioning chamber 44, which is directly connected with the upstream side D_1 of the discharge port or slot D, as indicated in Column 2, Lines 30-41. The foregoing is further improved upon by additional serially arranged cushioning chambers 48 and passages 50, which reduce sound under specific or special design conditions of the volumes of the chambers and of the diameters of the passages, as described in Column 2, lines 42-66. Consequently, a noise reduction is achieved by the serialized arrangement of chokes and hydraulic capacitors.

However, Perstnev, et al. does not open a second end of the pressure compensation line into the outlet-side working line. Moreover, Perstnev, et al. does disclose a certain length (L) between the second end to pressure compensation line and the outlet-side kidney-shaped control port.

Hereby, referring to Perstnev, et al., the present Claim 1, as presented herein, is novel thereover, inasmuch as while reviewing the Office Action, applicant notes that the Examiner even confirms the novelty of Claim 1 under Paragraph 13 of the Office Action, wherein the Examiner confirms that the passage 42 of Perstnev, et al. does not terminate at a point along the working line.

Consequently, Claim 1, as amended and presented herein, provides for a unique distinction in solving the reduction of the sound of a piston machine and through the utilization of an entirely different physical and technological concept.

The present invention, as claimed, utilizes a technique of simply absorbing the pressure waves by a direct connection of a switch over region to the working line at a well-defined distance (L) from the start or beginning of the working line. This leads to the elimination or extinction of a pressure wave, and provides for a ready and inexpensive method of producing the structure in comparison with the complex designs, such as the labyrinth paths disclosed and claimed in Perstnev, et al., having reference to Column 2, Line 45.

Consequently, Claim 1 clearly and patentably distinguishes over Perstnev, et al.

Even combining Claim 1 with Burdisso, et al. would not render Claim 1 or the dependent claims obvious to one skilled in the art.

In Burdisso, et al., the latter discloses a fan noise reduction from turbofan engines, generally employed in a jet aircraft or the like. Inasmuch as jet engines are not deemed to be related prior art, and pertain to an entirely different field of technology which is not applicable to the type of devices or piston engines, as described and claimed herein, one skilled in the art would not combine the disclosures of Perstnev, et al. and Burdisso, et al., inasmuch as the latter utilizes an air medium, which is compressible in contrast with incompressible hydraulic liquids. Accordingly, entirely different principles of operation and correlating structures are demanded between Burdisso, et al. and Perstnev, et al.

Moreover, in Burdisso, et al., the second pipe 12 possessing a length L_2 cannot be deemed, under one hand, as a switchover region and, on the other hand, as an outlet-side working line in accordance with the structure and function thereof. Burdisso, et al. only discloses a second pipe 12,

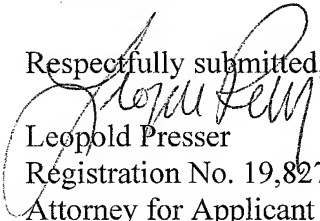
in Column 4, Line 59, but fails to disclose any switchover region. Consequently, even combining Perstnev, et al. and Burdisso, et al. in that regard would not be obvious since it would not provide for structure or function, as set forth in the amended Claim 1 herein.

With regard to the further references of record, these also only disclose minor features in combination with the preceding prior art, and would not in any manner render these applicable to the present invention, as set forth in Claim 1 and the dependent claims therefrom, as presented and amended herein.

In view of the foregoing comments and amendments, the claims are deemed to be fully and patentably distinct over the art, irrespective as to whether all of these publications are considered individually or in combination with each other, particularly in view of the lack of pertinence of the primary reference of record to Perstnev, and the combination thereof with Burdisso, et al.

Accordingly, in view of the foregoing comments and amendments, which are deemed to be fully responsive to the Examiner's grounds of objection and rejection, the early and favorable reconsideration and issuance of the Notice of Allowance is earnestly solicited.

However, in the event that the Examiner has any queries concerning the instantly submitted Amendment, applicants' attorney respectfully requests that he be accorded the courtesy of possibly a telephone conference to discuss any matters in need of attention.

Respectfully submitted,

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